

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTERN DISTRICT OF ALABAMA  
(SOUTHERN DIVISION)**

**BOBBY SINGLETON, *et al.*,**

**Plaintiffs,**

**v.**

**JOHN MERRILL, in his official  
capacity as Alabama Secretary of State**

**Defendant.**

**Case No. 2:21-cv-01291-AMM**

**THREE-JUDGE COURT**

**EVAN MILLIGAN, *et al.*,**

**Plaintiffs,**

**v.**

**JOHN MERRILL, in his official  
capacity as Alabama Secretary of State**

**Defendant.**

**Case No. 2:21-cv-01530-AMM**

**MARCUS CASTER, *et al.*,**

**Plaintiffs,**

**v.**

**JOHN MERRILL, in his official  
capacity as Alabama Secretary of State**

**Defendant.**

**Case No.: 2:21-cv-1536-AMM**

**SUPPLEMENTAL EXPERT REPORT OF M.V. HOOD III**

I, M.V. Hood III, affirm the conclusions I express in this report are provided to a reasonable degree of professional certainty. In addition, I do hereby declare the following:

In this supplemental expert report, I write to raise some questions concerning reports issued by plaintiffs' experts Professor Maxwell Palmer and Professor Baodong Liu. Both Professor Palmer and Professor Liu conducted a series of racially polarized voting analyses.

My concerns are as follows:

1. Professor Palmer relies on Citizen Voting Age Population from the Census. Although these data come from the U.S. Census Bureau, they are based on survey data from the American Community Survey (ACS) and not on the population enumeration data collected every decade (P.L. 94-171).<sup>1</sup> As such, these figures are actually estimates which come with a margin of error. Unlike most states, Alabama records the race of registrants in its voter registration database. Combining this source with voter history files also allows one to calculate turnout by race. In this case, these are not estimates, but actual counts of registration and turnout by race. Additionally, the CVAP data from the ACS are only available down to the block group level. Districting plans that are drawn at the block-level would require one to disaggregate the CVAP data to that level. While this can be done, one is required to make a number of assumptions about the manner in which the CVAP block group data should be disaggregated to the respective blocks in the group.<sup>2</sup> This process may, in turn, also introduce another source of potential error.
  
2. Professor Palmer obtained most of the data he used in his analyses from the Redistricting Data Hub website. Under the data for Alabama hosted on this website, a document provides a detailed set of notes on data collection and management. Precinct-level election data merged with precinct geography shapefiles are provided on this site. But, there are a number of potential notes of caution. For example, this organization reports they "were not able to replicate joining election data and precinct boundaries because we did not have precinct boundary data for every county."<sup>3</sup> It is unclear from his report how much time Professor Palmer engaged in to validate the quality of data housed on the Redistricting Data Hub website.

As an example, the VTDs (precincts) on the Redistricting Data Hub's website for Washington County do not comport with the actual precinct boundaries. After examining the VTD shapefiles for Washington County on the Redistricting Data Hub website, I was able to determine they were represented by Figure 1 below (red lines). However, after consultation with Washington County election officials, I was able to determine Washington's voting precincts are actually represented by Figure 2 (green lines).

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<sup>1</sup>See Citizen Voting Age Population by Race and Ethnicity (<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>).

<sup>2</sup>See Citizen Voting Age Population by Race and Ethnicity (<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>).

<sup>3</sup>Found at: [https://redistrictingdatahub.org/wp-content/uploads/2021/06/al\\_vest\\_20\\_validation\\_report.pdf](https://redistrictingdatahub.org/wp-content/uploads/2021/06/al_vest_20_validation_report.pdf).

**Figure 1****Figure 2**

3. For 2020, Professor Palmer reports that he uses actual turnout data by race, again obtained from the Redistricting Data Hub website. These data were derived from a commercial vendor L2. Although Alabama does record data on the race of registrants, L2 instead imputes the race of registrants in its database. Using the voter registration and history files from the Alabama Secretary of State, I was able to compare L2's racial turnout data to the state's. By county, the L2 data consistently underestimated the percentage of white voters by an average of 4.3%.<sup>4</sup> On the other hand, the percentage of *other* voters was consistently overestimated by L2 by an average of 4.2% at the county-level.<sup>5</sup> The percentage of black voters was overestimated by L2 in some counties and underestimated in others. While these discrepancies in the L2 turnout data may not appear to be all that sizable, they certainly could make a difference in a district functionality analysis where the racial composition of the district in question is evenly divided.

4. Professor Liu provides a number of district functionality tests in his report that record a column for turnout. I am unsure how exactly this figure is calculated or the manner in which it is used in determining functionality as there are no explanatory notes provided. They appear to be estimates; again this property does not need to be estimated in Alabama. If one assumes these are

<sup>4</sup>Calculated as the mean of (L2 Percent White-SOS Percent White) for Alabama's 67 counties.

<sup>5</sup>The *other* category comprises any voter who is not identified as white or black.

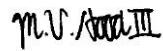
turnout rates by racial group, then in every case reported in Tables 4-7, the black turnout rate exceeds that for whites (twelve out of twelve times) and in some cases by ten percentage points. But, data from the Alabama Secretary of State suggest that white turnout is typically slightly higher than black turnout. For example, in my initial report in this matter for the 2020 presidential election in CD 7 (Adopted) white turnout based on SOS figures was 63.6%, compared to 57.9% for blacks. Professor Liu reports black turnout for the 2018 Lieutenant Governor's race for Adopted CD 7 at 50.3%, compared to 41.5% for whites.

5. Professor Liu also reports using *any-part* Black VAP in the functional (effectiveness) analyses presented for his report (see Footnote 20 of his report). However, this raises a valid question as to whether individuals who are multi-racial (in this case any-part Black) vote cohesively with the population of single-race groups (in this case single-race, non-Hispanic Blacks). I am unable to determine exactly how Professor Palmer operationalized racial categories in his analyses based on his report. To the best of my knowledge, racial classifications in the Alabama voter registration database are based on single-race categories.

**DECLARATION**

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

Executed on December 20, 2021.



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